



Detection of a resistance gradient to *Passion fruit woodiness virus* and selection of ‘yellow’ passion fruit plants under field conditions

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ABSTRACT. Productivity of ‘yellow’ passion fruit (*Passiflora edulis* Sims. f. *flavicarpa* O. Deg.) is reduced by infection with *Cowpea aphid-borne mosaic virus* (CABMV). We examined resistance in 72 yellow passion fruit plants grown from open-pollinated commercial seed. Plants were mechanically inoculated with CABMV virus and maintained in the field in order to select contrasting genotypes for resistance. Isolates were obtained from symptomatic leaves of yellow passion fruit plants from field production in Livramento de Nossa Senhora, Bahia State and were characterized by sequencing the viral coat protein gene. Severity of leaf symptoms of the disease, evaluated through a global leaf disease index, was measured during the eighth month of growth. Morpho-agronomic variables of fruit were evaluated from months 10 to 12. Significant linear regressions between the quantification of the leaf symptoms and the morpho-agronomic characteristics related to productivity were detected ($5.17\% \leq R^2 \leq 11\%$; $0.002 \leq P \leq 0.028$). Based on evaluations of fruit productivity, severity of leaf symptoms of the disease, and the application

of a selection index of 10%, four contrasting groups of 'yellow' passion fruit plants considered as "resistant", "mildly resistant", "susceptible" and "extremely susceptible" in their reaction to CABMV ($0.0001 < P < 0.024$) were selected. These plants could be useful for genetic studies and for breeding yellow passion fruit plants resistant to this disease.

Key words: CABMV; Passion fruit; *Passion fruit woodiness virus*; Tolerance; Susceptibility; Virology